

CLAIMS

- 5 1. A method for the assay of N samples each containing a compound to be tested, which method comprises the steps of:
- a) providing N populations of carrier beads where the carrier beads of each population are distinguishable from the carrier beads of every other population;
- 10 b) dispensing each of the N populations of labelled carrier beads into one of N different reaction vessels;
- c) dispensing each of the N samples into one of the said different reaction vessels;
- d) providing in each of said N different reaction vessels reagents
- 15 for performing an assay whereby a signal moiety is caused to be partitioned in a compound-related manner between the carrier beads in that reaction vessel and a supernatant fluid;
- e) combining the contents of all of the reaction vessels into a mixture; and
- 20 f) subjecting the mixture to analysis by flow cytometry, to assay the signal moiety associated with each of a sequence of individual beads; wherein N is greater than or equal to 2.
2. A method as claimed in claim 1, wherein in step a) there are
- 25 provided N populations of carrier beads where the carrier beads of one population are distinguishable by virtue of a detectable label from the carrier beads of another population.
3. A method as claimed in claim 1 or claim 2, wherein N is
- 30 80 - 100,000.

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4. A method as claimed in claim ~~2 and claim 3~~, wherein in step f) the mixture is subjected to analysis by flow cytometry, to assay the signal moiety and the label associated with each of a sequence of individual beads, whereby the signal moiety indicates the biological activity of the compound to be tested and the label indicates the sample containing the compound.

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5. A method as claimed in ~~any one of claims 1 to 4~~ ^{claim 1}, wherein N is from 80 to 4000.

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6. A method as claimed in ~~any one of claims 1 to 4~~ ^{claim 1}, wherein the beads are pre-coated with a reagent for performing the assay.

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7. A method as claimed in ~~any one of claims 1 to 6~~ ^{claim 1}, wherein a population of beads is detectably labelled by means of at least one fluorescent dye.

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8. A method as claimed in ~~any one of claims 1 to 6~~ ^{claim 1}, wherein a population of beads is electronically labelled.

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9. A method as claimed in ~~any one of claims 1 to 8~~ ^{claim 1}, wherein the signal moiety is a fluorescent dye.

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10. A method as claimed in ~~any one of claims 1 to 9~~ ^{claim 1}, wherein in step d) the same reagents for performing the same assay are provided in each of the N different reaction vessels.

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11. A kit for the assay of N samples each containing one or more compounds to be tested, which kit comprises N populations of carrier beads where the carrier beads of each population are distinguishable from the carrier beads of every other population, and wherein all the beads are

5 pre-coated with the same reagent at substantially the same surface concentration for performing the assay, together with a supply of reagents for performing the assay, where N is at least 2.

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